



Division of Waste Management
Superfund Branch - Petroleum Cleanup Section
200 Fair Oaks Lane, 2nd Floor
Frankfort, KY 40601

Closure Report for Petroleum Releases and
Exempt Petroleum Tank Systems
DEP 7097C

Revised October 2009

Notice: On March 18, 2004, Kentucky enacted a new cleanup regulation (401 KAR 100:030), which establishes standards under KRS 224.01-400 and 224.01-405 with respect to hazardous substances, pollutants, contaminants, petroleum, and petroleum products that are protective of human health, safety, and the environment. This administrative regulation governs remediation under KRS 224.01-400 and 224.01-405, 224.01-510 through 224.01-532, and 224.01-450 to 224.01-465.

The purpose of this form is to document the remediation of any site impacted by releases of petroleum products and the closure of petroleum tank systems which are **NOT** regulated under 401 KAR Chapter 42 (the Underground Storage Tank Program). **Please read the Instruction Booklet and Appendices to form DEP 7097C completely. New evaluation procedures have been implemented for screening and remediating sites.** This evaluation process requires calculations for determining contaminants of concern (CoCs) and the associated cancer risks and non-cancer hazards. Results of "non-detect" are considered to be at one-half their detection limit for purposes of calculation. Please note that sites with multiple contaminants must consider additivity when determining overall site risk. **Therefore, individual PRG values are not directly compared to individual sample results when screening or remediating sites with multiple contaminants of concern.**

For a detailed listing of tanks not regulated under the Underground Storage Tank Program, refer to 40 CFR Part 280. Registration and Notice of Intent to Close these tanks and/or release sources is not required. While the use of this form is not required, the information on this form must be submitted to the Cabinet to receive a letter documenting closure of the site in accordance with KRS 224.01-405. **This form is not to be used for the closure of underground storage tanks regulated under 401 KAR Chapter 42.** For information on closure requirements for underground storage tanks regulated under 401 KAR Chapter 42, you may contact the Underground Storage Tank Branch at (502) 564-5981.

INSTRUCTIONS

The following are instructions for completing the Closure Report, which begins on page 1. Contact the Superfund Branch at (502) 564-6716 if you have any questions concerning the form or the instructions.

- If clean closure or closure in-place under item 8 a, b or c is chosen, complete Section I, II, and V of the Closure Report.
- If Risk Assessment in item 8 d is chosen, then refer to Section I, II, III and V.
- If site treatment under item 8 e is chosen, then complete Section I, IV and V.

Please submit the original closure report and one (1) copy to the Superfund Branch for review.

**CLOSURE REPORT
FOR PETROLEUM RELEASES AND
UNREGULATED (EXEMPT) PETROLEUM TANK SYSTEMS**

**SECTION I
Facility Information**

1. Name of Facility _____
Name of person or other legal entity which owns the facility or property _____
Mailing Address _____
City _____ State _____ Zip Code _____
Contact Person _____ Phone Number () _____
Email address _____
2. Address of facility or property if different from items # 1. _____
City _____ County _____ Zip Code _____
Contact Person _____ Phone Number () _____
Email address _____
3. Facility/Property Location _____ Latitude _____ Longitude _____
4. Facility ID number (if applicable) _____
5. Tank or Release Location (check one)
 - a. ☐ Residence
 - b. ☐ Noncommercial Farm
 - c. ☐ Service Station/Center
 - d. ☐ Industry
 - e. ☐ Commercial Business
 - f. ☐ Government
 - g. ☐ Other (explain) _____

Name, address, & phone number of person(s) performing contract work (removal or assessment)

6. Name/Company Name _____
Address _____
City _____ County _____ State _____
Zip Code _____ Phone () _____
Email address _____

7. Number of Tanks/Releases to be closed at this site _____

- a) **Substances currently or previously stored in Tank(s) or Released (Indicate appropriate dates).** Answer all relevant questions to the extent possible. Any questions not applicable to tank or release should be marked "NA". For releases, sections b and c must also be completed.

Substance Stored in Tank(s) or Released	Release or Tank No. _____	Release or Tank No. _____	Release or Tank No. _____	Release or Tank No. _____	Release or Tank No. _____
Tank/Release Content Information					
Kerosene					
Leaded Gasoline					
Unleaded Gasoline					
Diesel					
Waste Oil					
Heating Oil					
Other (List Product)					
Unknown					
Tank Information					
Size of Tanks (gals)					
Date of Installation					
Date of Last Use					
Above Ground Tank (AG) Underground Tank (UG)					
Release Information					
Volume Released (gals)					
Volume Recovered (gals)					
Date Release Discovered					
Release Reported? (yes or no)					
Notification/Complaint Number (if applicable)					

- b) **Type of Petroleum Release (Include Release No. in appropriate blank). For closure of tanks, skip to item 8.**

_____ Facility Spill

_____ Train Derailment

_____ Oil & Gas

_____ Transportation Accident

_____ Other (Explain below)

- c) **In the space below, provide a brief explanation of how each release occurred.** Include any measures taken to prevent similar releases in the future if possible. Attach additional sheets if needed.

8. Type of closure requested for each tank or petroleum release. Enter tank or release number(s) if applicable from item 7 a). A brief discussion of closure options is included in **Appendix A of the Instruction Booklet for form DEP 7097C, revised October 2009.**

- a) ___ Clean closure (**underground storage tanks only**). Sections I, II, and V.
- b) ___ Closure in-place (**UST's and/or piping**). Sections I, II, and V.
- c) ___ Clean closure (**above ground tanks and surface releases**). Sections I, II, and V.
- d) ___ Risk Assessment. Sections I, III and V.
- e) ___ Site Treatment. Sections I, IV and V.

9. If the tank(s) or piping are to be closed in place, provide justification (technical, environmental, etc.) for leaving the tank(s) and/or piping in place. If more space is needed, attach additional sheets.

10. Please submit the following as **Attachments A and B**:

- a) A site map drawn to scale with north arrow showing the location and source of the release, tanks, piping, ancillary equipment, buildings, roads, etc. (**Attachment A**).
- b) A USGS 7.5 minute topographic map showing the location of the site. (**Attachment B**).

List the map quadrangle name _____

After completing the appropriate section, please remember to sign the applicant certification in Section V.

SECTION II
Clean Closure or Closure in-place Under Item 8 (a), (b) or (c)

For surface petroleum releases not involving a tank system; skip items 11 and 12. Proceed to item 13.

11. Did the tank contain any sediment and/or residual free product? ☐ Yes ☐ No

If yes,

a) How much free product was removed? _____
Disposal location (**Attachment C**) _____

b) How much sediment was removed? _____
Disposal location (**Attachment C**) _____

c) The sediment must be tested to insure that it is non-hazardous waste. The sediment must be tested using the Toxicity Characteristic Leaching Procedure (TCLP) analysis for disposal.

d) Provide the proper documentation (receipts or manifests) for disposal of any sediment or free product (label as **Attachment C**).

12. Has the tank been removed from the site? ☐ Yes ☐ No

a) If yes, what was the final disposal location of the tank?

b) Provide the proper documentation for disposal of the tank and label as **Attachment D**.

c) If the tank was closed in place, what inert solid material was used to fill the tank (i.e. concrete, sand, gravel, etc.)? _____

13. The pit walls, floor, stockpiled soils, and any water collected in the pit must be sampled separately. See item 16 below and Table A on page 6 for analytical requirements. Provide copies of all analyses, chain of custody documents and a legible sampling map that shows a labeled sample point for each sample collected as **Attachment E**. **NOTE: All sample results must be identified by location (ex. North wall, South wall, Floor, etc.).**

14. Submit a single receipt indicating the total amount of excavated soil or individual receipts documenting the total amount of excavated soil accepted by a disposal facility and label as **Attachment F**. **Please note that the documents submitted to verify disposal must clearly identify the disposal facility.**

15. If soil samples must be taken to demonstrate **background levels** for **inorganic constituents** at the site, **locate these sample point(s) on the site map listed in item 10 a)**. Provide copies of the analyses and chain of custody documents labeled as **Attachment G**. **Background sampling must be conducted in accordance with sections 3.2, 3.3 and 3.4 of the U.S. EPA Region 9 Preliminary Remediation Goals Guidance Document (October 1, 2002) and the Kentucky Guidance Ambient Background Assessment (January 8, 2004).**

16. Analytical requirements for common petroleum products are listed in Table A on page 6. For petroleum products not listed, please contact the Superfund Branch.

Table A
Analytical Requirements for Petroleum Tanks/Releases

Petroleum Substance	Analysis	Acceptable Method
Unleaded Gasoline	BTEX	SW-846 8340, 8260, 8020, or 8021
Leaded Gasoline and Tanks in use prior to 1977	BTEX and Total Lead *	
Crude Oil + or Kerosene, or Jet Fuel	BTEX and PAH	
Diesel or Heating Fuel	PAH	SW-846 8100, 8270, or 8310
Waste Oil	PAH, Total Metals **	SW-846 8100, 8270, or 8310 SW-846 6010
New Oil, Hydraulic Oil, or Mineral Oil	TPH and PAH ***	SW-846 8015B (soil) EPA Method 1664A (water)
Other Petroleum or Non-Petroleum Substances	Contact the Superfund Branch	

BTEX: Benzene, Toluene, Ethylbenzene, and Xylene

PAH: Polynuclear Aromatic Hydrocarbons

TPH: Total Petroleum Hydrocarbons

* For leaded gasoline or for any tanks that stored gasoline and were in use prior to 1977, total lead must be analyzed in addition to BTEX. SW-846 methods 7420, 7421, or 6010 must be used.

** Total Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver.

*** For releases of new oil, hydraulic oil, mineral oil and other petroleum substances, media analyses by extensions of SW-846 lab methods may also be used. The Superfund Branch should be contacted for further information.

+ A survey for naturally occurring radioactive material (NORM) concentrations for Radium 226 and Radium 228 may be required.

Note: Disposal facility may require additional testing of contaminated waste material including TCLP before accepting for disposal. Contact the facility in advance.

17. Clean closure for unregulated UST's and surface petroleum releases from AST's and other sources can be achieved through removal of the contaminants to acceptable levels based on the **U.S. EPA Region 9 Preliminary Remediation Goals (PRG) (October 1, 2002) used in accordance with the U.S. EPA Region 9 Preliminary Remediation Goals Guidance Document (October 1, 2002) and other guidance documents established in 401 KAR 100:030. Copies of these documents can be found in the Appendices of the Instruction Booklet for form DEP 7097C, revised October 2009.** This evaluation process requires calculations for determining contaminants of concern (CoCs) and the associated cancer risks and non-cancer hazards. Results of "non-detect" are considered to be at one-half their detection limit for purposes of calculation. Please note that sites with multiple contaminants must consider additivity when determining overall site risk. **Therefore, individual PRG values are not directly compared to individual sample results when screening or remediating sites with multiple contaminants of concern.**

Table B
Cleanup Standards for AST's, Surface Releases and Exempt UST's

Parameter	Soil	Groundwater
BTEX	Use Residential Region 9 Preliminary Remediation Goals (PRG) as the initial screening levels	B: 0.005 ppm T: 1.0 ppm E: 0.7 ppm X: 10.0 ppm
PAH	Use Residential Region 9 Preliminary Remediation Goals (PRG) as the initial screening levels	cPAH: 0.0002 ppm nPAH: MCL's* Naphthalene: 6.2 ppb
TPH	No carcinogenic PAH constituent present above Region 9 PRG screening levels; each individual PAH constituent must be below Region 9 PRG screening levels. Residential TPH - 100 ppm; Industrial TPH - 250 ppm	5.0 ppm
Total Lead	Use Residential Region 9 Preliminary Remediation Goals (PRG) as the initial screening levels	0.015 ppm
Total Metals	Use Table 2, page 19, Generic Statewide Ambient Background for Kentucky found in Kentucky Guidance for Ambient Background Assessment (1/8/04)	MCL's*

BTEX: Benzene, Toluene, Ethylbenzene, and Xylene (total)

PAH: Polynuclear Aromatic Hydrocarbons:

cPAH: Allowable level individually for Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Ideno(1,2,3-cd)-pyrene and Chrysene

nPAH: Allowable level individually for Acenaphthene, Anthracene, Fluoranthene, Fluorene, Pyrene.

Naphthalene

Acenaphthylene:	Residential Soil - 3,700 ppm	Industrial Soil - 29,000 ppm
Benzo(ghi)perylene:	Residential Soil - 2,300 ppm	Industrial Soil - 29,000 ppm
Phenanthrene:	Residential Soil - 3,700 ppm	Industrial Soil - 29,000 ppm

ppm: parts per million (mg/kg) or (mg/L)

ppb: parts per billion (µg/kg) or (µg/L)

TPH: Total Petroleum Hydrocarbons

***Maximum Contaminant Level 401 KAR Chapter 8 (Drinking Water Standards)**

SECTION III Risk Assessment Under Item 8 (d)

See **Appendix A** of the instruction booklet for general guidance on risk-based cleanup options. Questions concerning risk assessment procedures should be directed to the Risk Assessment Section of the Superfund Branch at (502) 564-6716. All risk assessment reports must be submitted to the Superfund Branch and these will be referred to the Risk Assessment Section for review. Closure by risk assessment requires submittal of a risk assessment or risk screening information sufficient to demonstrate that no further action is necessary (Option A), or a human health and ecological risk assessment along with a plan to manage the release (Option B), in accordance with KRS 224.01-400 (18) to (21).

SECTION IV Site Treatment Under Item 8 (e)

Those facilities choosing to treat petroleum-contaminated soils or groundwater must address all of the items listed below in a detailed **Corrective Action Plan (CAP)** designed to remediate affected soils and/or groundwater to allowable levels. The CAP should be submitted to the Superfund Branch for approval prior to starting any treatment. Label the CAP as **Attachment H. For unregulated tank sites and other petroleum releases, a Notification for Registered Permit-by-Rule is no longer required for soil treatment proposals.** Acceptable levels are based on the **U.S. EPA Region 9 Preliminary Remediation Goals (PRG) (October 1, 2002)** used in accordance with the **U.S. EPA Region 9 Preliminary Remediation Goals Guidance Document (October 1, 2002)** and other guidance documents established in **401 KAR 100:030**. **Copies of these documents can be found in the Appendices of the Instruction Booklet for form DEP 7097C, revised October 2009.** This evaluation process requires calculations for determining contaminants of concern (CoCs) and the associated cancer risks and non-cancer hazards. Results of "non-detect" are considered to be at one-half their detection limit for purposes of calculation. Please note that sites with multiple contaminants must consider additivity when determining overall site risk. **Therefore, individual PRG values are not directly compared to individual sample results when screening or remediating sites with multiple contaminants of concern.** The CAP must include the following information:

- A discussion of the soils, geology, and hydrogeology of the site
- Summary of site characterization and related information
- Soil and/or groundwater remedial objectives
- Comparative treatment technologies given consideration for the site
- Selected treatment technology; and criteria used to select this technology
- Results of any pilot or feasibility studies conducted
- Permits required for the treatment system (air emissions, Underground Injection Control, KPDES, etc.)
- Monitoring plan and time table for remediation and closure
- Closure plan (confirmation sampling plan for target contaminants in soil and/or groundwater)
- Waste handling methods
- Storm water control plan to prevent off-site migration of contaminants
- Revegetation plan for disturbed areas
- Any other technology specific requirements (Ex: thin-spreading - list type and thickness of liner)

For further information on treatment technologies and site-specific considerations in choosing a technology, contact the Superfund Branch Petroleum Cleanup Section.

A **Corrective Action Report (CAR)** must be submitted to the Superfund Branch **within thirty (30) days of receipt of sample results** confirming that allowable levels of contaminants in soil and/or groundwater have been achieved. For **long-term treatment sites** (treatment exceeding six months), a **quarterly status report must be submitted** which summarizes the work that has been conducted and includes results of any sampling done at the site.

18. Amount of soil to be treated _____ (yd³ or tons)

Type of proposed soil or groundwater treatment

a) _____ Aeration (thin-spreading requires liner)

b) _____ Thermal treatment

c) _____ Bioremediation

d) _____ Soil vapor extraction

e) _____ Bioventing

f) _____ Air sparging

g) _____ Pump and treat

h) _____ Other _____

19. Location of the treatment area if different from tank/release location in Section I. Provide a copy of U.S.G.S. 7.5 minute topographic map if applicable. _____

20. Treatment Period

a) Date when treatment is to start _____

b) Date of the expected completion _____

21. **Company performing treatment**

Name of company _____

Contact Person _____

Mailing Address _____

City _____ State _____ Zip _____

Phone () _____ Email _____

22. **Provide the following information if the soil is to be treated at a permitted off-site treatment facility.**

Name of facility _____

Permit/Registration # _____

Contact Person _____ Phone () _____

SECTION V
Applicant Certification

An authorized agent must sign the certification. Example: owner, president, vice-president, plant manager, plant engineer, mayor, city engineer, or other appropriate official. The applicant signature below **CANNOT BE** the consultant or broker.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for such violations."

Print Name of Applicant

Title

Signature of Applicant

Date

Signature of Consultant/Engineer (if application was prepared by a consultant)

Kentucky P.E. or P.G. Registration No. _____

Pursuant to KRS 322, any work constituting the public practice of engineering shall be performed by a Professional Engineer (P.E.) registered with the Kentucky Board of Registration for Professional Engineers and Land Surveyors. Pursuant to KRS 322A, any work constituting the public practice of geology shall be performed by a Professional Geologist (P.G.) registered with the Kentucky Board of Registration for Professional Geologists or a Professional Engineer (P.E.) registered with the Kentucky Board of Registration for Professional Engineers and Land Surveyors.

Subscribed and sworn to before me by _____

This the _____ day of _____ 20____

State of _____, County of _____

Notary Public Signature _____

My commission expires _____

*****IMPORTANT REMINDER*****

All Signatures Must Be Original. PHOTOCOPIES WILL NOT BE ACCEPTED.

ATTACHMENTS

- A. A site map showing the location of the tanks, piping, ancillary equipment buildings, roads, etc.
- B. A USGS 7.5 minute topographic map showing the location of the site.
- C. Documentation for the disposal of any sediment or free product.
- D. Documentation (such as receipts) for the disposal of the tank(s).
- E. Copies of all laboratory analytical results for the testing of the pit walls, floor, stockpile area, and pit water (if encountered), including all chain of custody documents and a legible sampling map that shows a labeled sample point for each sample collected.
- F. Documentation (such as receipts) for the disposal of the contaminated soil excavated from the site, which clearly identifies the disposal facility.
- G. Copies of analytical results and chain of custody documents for samples taken to demonstrate background levels for inorganic constituents at the site.
- H. Corrective Action Plan (CAP) detailing proposal to treat soils and/or groundwater. Groundwater must be remediated to Federal Drinking Water MCL's (Maximum Contaminant Levels).